#1 Colorado River

Threat: Looming pollution crisis

RANDY SHOWSTACK

Summary

While conflict over Colorado River water allocations has grabbed headlines for years, water pollution problems from human waste, toxic chemicals, and radioactive material have been largely overlooked and threaten to get much worse. Unless Congress and the federal government step in to bolster local cleanup efforts, the drinking water for 25 million Americans will remain at risk.

The River

The Colorado River starts as melting snow in the Rocky Mountains. Covering almost 250,000 square miles, the river basin includes portions of seven states and more than 20 Indian nations. Despite the vastness of its watershed, the Colorado is a small river, annually averaging only about 1 percent of the Mississippi River's yearly flows.

BOB SCHULZ

As the river winds across the Colorado Plateau, the ranches, mines, and reservations of the Old West uneasily share the landscape with the national parks, ski resorts, and suburban sprawl of the New West. When the river pours out of the Grand Canyon in Arizona it enters the Sonoran Desert, where a shortage of water has failed to curb explosive population growth in recent decades.

The Colorado is one of the most intensively used — and abused — river basins in America. More than 40 major dams and diversions siphon water from the river and its tributaries. As much as 20 percent of the river's water evaporates from the reservoirs behind the dams each year. Several of the river's native wildlife species are extinct, and others nearly so. Most years, the river literally evaporates shortly after crossing the border into Mexico. The once vast and rich delta at the river's mouth in the Gulf of California has virtually disappeared as a result.

The Risk

Three major sources of pollution are seeping into the Colorado River via contaminated groundwater. Some efforts are being made to address each of them, but more aggressive and better-coordinated action is needed to protect the health of the river, the 25 million Americans who drink its water, and the wildlife and parks found along it.

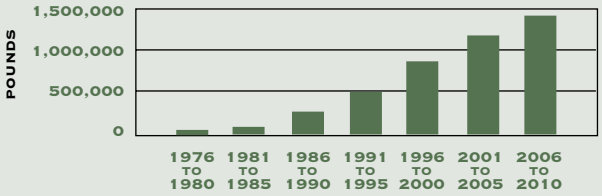
Human waste from riverfront boomtowns in California and Arizona contaminates the river below Hoover Dam. This area has the largest concentration of people in the United States using septic tanks. The overloaded septic systems allow increasing quantities of nitrates to seep into groundwater and the Colorado River. Monitoring wells in the Lake Havasu area have recorded nitrate levels four times higher than the limits set by the Environmental Protection Agency (EPA) to protect the public health. High nitrate levels in drinking water can deplete oxygen in infants' blood ("blue baby" syndrome) and are suspected to cause certain types of cancer. An estimated 1.2 million pounds of nitrates will seep into the regional aquifer between 2001 and 2005.

Riverfront communities in Arizona and California recognize the problem and are raising capital on their own to upgrade wastewater treatment capacities. They could use some help, but in recent years federal assistance to states for

Left: Communities along the lower Colorado River are struggling to provide wastewater treatment to their booming populations.

Lake Havasu City, Ariz. Nitrate Data

Nitrate Entering Groundwater Along the Colorado River Over Each 5-Year Period



SOURCE: COLORADO RIVER REGIONAL SEWER COALITION

BUREAU OF RECLAMATION

POLLUTED WATER FROM COLORADO RIVER WATER IS USED TO IRRIGATE CROPS — TRACE AMOUNTS OF THE TOXIC CHEMICALS CAN BE MEASURED IN PRODUCE ON SUPERMARKET SHELVES ACROSS THE COUNTRY (BELOW).

wastewater treatment facilities has been cut by more than 10 percent, and the current administration proposes slashing some 30 percent — half a billion dollars — from loan programs for facility upgrades.

A second type of contamination is an ingredient in rocket fuel called perchlorate, which has been measured in Lake Mead at concentrations as high as 24 parts per billion. Although no federal health standard for perchlorate has been set, low concentrations can interfere with proper thyroid function and disrupt the body's normal hormonal balance. The potential health effects of perchlorate are especially significant for children because disturbances in thyroid levels during development can lead to lowered IQ, mental retardation, and the loss of hearing, speech and motor skills. The Las Vegas Valley Water District is unable to remove perchlorate from water piped to its residential customers. Lettuce and other leafy vegetables irrigated with Colorado River water contain trace amounts of the chemical — and are found on supermarket shelves across the country during winter months.

The source of perchlorate in the river is a facility in Henderson, Nev., where the government produced missile fuel during the Cold War. The plant is now operated by Kerr-McGee Corporation, which has already spent $80 million to reduce the volume of polluted groundwater reaching the river. However, more than 400 pounds of perchlorate still flow from the facility toward Lake Mead each day.

ERIC ECKL

The third pollution source is radioactive mill waste from a defunct facility along the Colorado River near Moab, Utah. With almost 12 million tons of radioactive material stored in a crude, unlined impoundment on the riverbank, the former Atlas Minerals Corporation site is the fifth largest and single most dangerous uranium tailings pile in the country. An estimated 110,000 gallons of radioactive groundwater seep into the river each day from this site. Uranium is one of the few carcinogens considered dangerous at any level, and levels in the river increase by 1,660 percent in the vicinity of the Atlas site.

Although the precise contribution from the Atlas site is unknown, Southern California's Metropolitan Water District has measured gradually increasing levels of radioactivity in the river hundreds of miles downstream at its Lake Havasu intake, where the drinking water for 16 million people is withdrawn from the river. The National Academy of Sciences has warned that it is "nearly certain that the river's course will run across the Moab site sometime in the future," flooding about a half ton of radioactive material for every man, woman, and child that drinks Colorado River water.

The 12-Month Outlook

The Colorado River is at a crossroads, and the next 12 months will determine whether these problems will continue to fester or a vigorous cleanup effort will begin. The situation as a whole warrants a massive, coordinated federal effort, and there are immediate steps that should be taken to address these pollution sources.

The Department of Energy (DOE) will finalize its plans for the radioactive mill tailings at the Atlas site before the end of 2004. Conservationists believe the best option is to completely remove the mill tailings and contaminated soil from the river floodplain, but the DOE has signaled that it will likely choose less protective options that would not provide sufficient security in the event of a major flood. DOE should not allow cost to dictate its choices. It should commit to the most thorough cleanup possible with current technology.

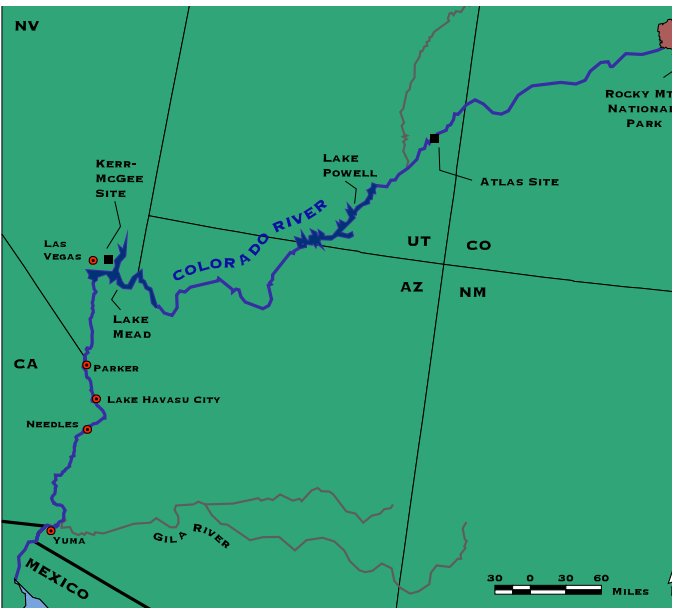
In the 2004 session of Congress, lawmakers will consider proposals to expand exemptions from environmental laws for the Department of Defense. Conservationists fear these could let the military off the hook for its share of the

cleanup responsibilities at the Kerr-McGee site and elsewhere. Congress should reject those bills and direct EPA to set a scientifically valid drinking water standard for perchlorate that will protect human health.

Also in the 2004 session of Congress, lawmakers will consider President Bush's proposal for sharp cuts in EPA's "State Revolving Loan Funds" program that assists state efforts with loans to upgrade drinking water and wastewater treatment. Funding shortages are the leading reason that communities struggle to meet their obligations to protect water they send downstream. Congress should fully fund this vital program.

In addition, Congress should recognize that the interstate nature of pollution problems in the Colorado River warrant a stronger federal role in cleanup. Congress should direct federal and state agencies to develop a binding action plan and authorize federal funding to restore water quality throughout the river basin — including addressing nitrates, perchlorate, and radioactive materials.

The lingering contamination and staggering remediation costs at the Kerr-McGee and Atlas sites provide a stark reminder that preventing pollution in the first place or cleaning it at the source is always preferable to cleaning it later. Congress should step up its oversight of the Bush administration's enforcement and interpretation of the Clean Water Act and pass the Clean Water Authority Restoration Act in the 2004 session to end the lingering debate over which waters are protected by federal law.



TOM TILL

It may be only a matter of time before a flood or earthquake sends 11 million tons of radioactive waste from the Atlas Uranium Mill into the Colorado River.

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www.americanrivers.org/colorado2004.html